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# INFO SHEET

## Veterinary Services

United States  
Department of  
Agriculture  
Animal and  
Plant Health  
Inspection  
Service  
March 2002

### Preventive Practices in Swine: Parasite Treatment

Swine parasites cost producers money. Therefore, almost all swine operations have some type of disease prevention program, which often includes treatment for parasites. Two types of parasites infect pigs: internal parasites, primarily worms; and external parasites, such as lice and mange. Internal parasites are commonly treated with products administered in water, feed, or by injection. External parasites are treated via sprays, dips, pour-ons, and products administered by injection or in feed. Swine are treated for parasites in all stages of the production cycle.

The USDA's National Animal Health Monitoring System (NAHMS) collected data on swine health and management practices from a random sample of swine production sites in 17 states<sup>1</sup> as part of the Swine 2000 study. These sites represented 94 percent of the U.S. pig inventory and 92 percent of U.S. pork producers with 100 or more pigs. Overall, 2,499 swine production sites participated in the study's first interview from June 1, 2000, through July 14, 2000. A second interview was completed by 895 of these sites between August 21, 2000, and November 3, 2000. For estimates in this report, small, medium, and large sites refer to sites with less than 2,000, 2,000 to 9,999, and 10,000 or more pigs in total inventory, respectively. Animal-level estimates reported here are based on a June 1, 2000, inventory.

#### Internal parasites

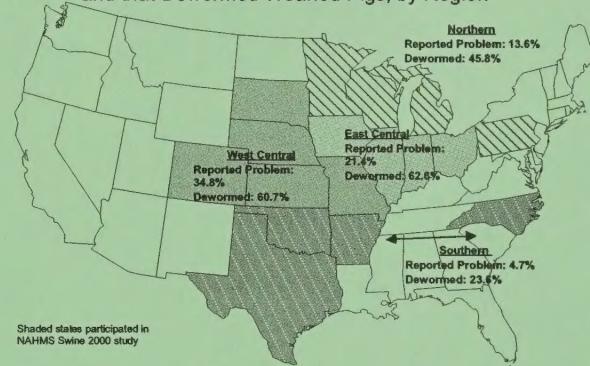
Over two-thirds (69.7 percent) of sites in the Swine 2000 study utilized some type of deworming program. Sows and gilts were the most common type of swine to be dewormed. During the period from December 1, 1999, through May 31, 2000, sows and gilts were dewormed on 83.0 percent of sites that had breeding females. Contrary to the common belief that boars are often excluded from parasite treatment programs, the study indicated that boars were dewormed on 76.8 percent of sites that had boars. Pigs from weaning to market age (including both nursery-age and grower/finisher pigs) were dewormed on 56.3 percent of sites, which accounted for 28.4 percent of pigs from weaning to

market age. Although 31.8 percent of sites with piglets dewormed them before or at weaning, this accounted for just 13.7 percent of all piglets.

Producers reported roundworms present on 19.6 percent of sites that had grower/finisher pigs; 18.0 percent of sites with nursery-age pigs; and 21.2 percent of sites that had any weaned pigs. The majority (76.8 percent) of sites where weaned market pigs had some outside access routinely dewormed, whereas only 44.6 percent of sites with strictly indoor facilities did so. Roundworms were a reported problem in weaned pigs on more operations in the west central region of the U.S. than any other region. Over 60 percent of sites in the east central and west central regions of the U.S. dewormed weaned pigs (Figure 1).

Figure 1.

Percent Sites that Reported a Roundworm Problem and that Dewormed Weaned Pigs, by Region



More small sites (23.9 percent) considered roundworms a problem in weaned pigs than medium (10.0 percent) or large (12.0 percent) sites. Likewise, more small sites (62.7 percent) dewormed weaned pigs compared to medium (27.0 percent) or large (8.4 percent) sites. The study indicated that only 73.3 percent of sites that considered roundworms a problem in either their grower/finisher or nursery pigs dewormed their weaned pigs.

Among the different methods of treating grower/finisher pigs for internal parasites, the most common route was via feed, followed by injection, and in water (Table 1). Fendbendazole was the most common dewormer given

<sup>1</sup>Arkansas, Colorado, Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Carolina, Ohio, Oklahoma, Pennsylvania, South Dakota, Texas, Wisconsin



to grower/finisher pigs in feed; ivermectin was the most common injectable product used; and levamisole was the most common dewormer given in water. Some type of dewormer was given to grower/finisher pigs on 54.4 percent of sites with grower/finisher pigs.

**Table 1. Percent Sites that Gave Specified Dewormers to Grower/Finisher Pigs Via Feed, Injection, or Water, by Type of Dewormer Given**

Product	Percent Sites Method of Dewormer Administration				Any Method
	Feed	Injection	Water		
Fenbendazole	27.8	N/A	N/A		27.8
Ivermectin	8.8	12.0	N/A		19.0
Levamisole	0.7	1.2	5.1		6.6
Any Dewormer	39.7	15.6	6.2		54.4

N/A = Not Applicable

Large sites were less likely to administer dewormers to grower/finisher pigs than small sites, regardless of method of administration (Table 2).

**Table 2. Percent Sites that Gave any Dewormers to Grower/Finisher Pigs Via Feed, Injection, or Water, by Size of Site**

Method Used	Percent sites Size of Site (Total Inventory)				All Sites
	Small (Less than 2,000)	Medium (2,000- 9,999)	Large (10,000 or More)		
Feed	44.5	19.0	5.3		39.7
Injection	18.5	2.3	6.1		15.6
Water	6.2	6.8	1.3		6.2
Any Method	61.3	25.1	9.3		54.4

## External parasites

Sarcoptic mange and lice are considered the primary external parasites in U.S. pork production. Mites burrowing through the skin cause a characteristic itching or rubbing as well as a reddish skin color. During the period from December 1, 1999, to May 31, 2000, 50.1 percent of sites utilized some type of external parasite treatment program. Mange or lice treatment was used most commonly on sites with either breeding females or boars (67.9 and 65.0 percent, respectively). Overall, 36.9 percent of breeding females and 46.6 percent of boars were on sites that treated for mange or lice. Pigs from weaning to market age were treated for mange or lice on

37.5 percent of sites, which accounted for 15.5 percent of all pigs from weaning to market age. Twenty-nine percent of sites with piglets treated them for mange or lice before or at weaning, which accounted for 12.0 percent of all piglets.

More small sites (43.4 percent) treated weaned pigs for mange or lice than medium (9.5 percent) or large (4.9 percent) sites. Fewer sites in the southern region of the U.S. treated weaned pigs for mange or lice (18.1 percent) than in any other region (40.2, 40.1, and 34.0 percent of sites in the west central, east central and northern regions, respectively).

Weaned pigs were treated for mange or lice on only 30.6 percent of sites where grower/finisher pigs had no outside access, compared to 52.2 percent of sites where grower/finisher pigs had outside access. Similarly, weaned pigs were treated for mange or lice on only 43.0 percent of sites where nursery pigs had no outside access, compared to 63.0 percent of sites where nursery pigs had outside access. Chemical-use information for controlling external parasites and other pests was collected in conjunction with the National Agricultural Statistics Service (NASS). NASS provides estimates of on-farm use of insecticides for controlling mange, mites, lice, flies, and other pests. The NASS report may be found at [www.usda.gov/nass](http://www.usda.gov/nass). The active ingredients used on swine most commonly include: Piperonyl butoxide, Amitraz, and Malathion, which accounted for 75 percent of the total pounds of active ingredients applied to swine.

All operations should examine swine periodically for internal and external parasites by using fecal egg counts to determine the presence of adult worms, or slaughter checks to determine the presence of migrating worm larvae in the liver as well as any skin damage caused by mites.

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